

Self-Service Device/POS system

A faster and cheaper test method for MID Certification

Self-Service Devices (SSDs) were traditionally subjected to a fair number of hardware tests – such as EMC, electrical and climatic conditions – to make them internationally acceptable. Based on an original Dutch proposal, Welmec WG10 recently agreed to an alternative test method for purely digital Self-Service Devices for fuel dispensers.

The alternative test method basically focuses on software tests without the need for performing hardware tests. The decision for this change was based on the fact that the functionality of purely digital devices is predominantly determined by its software.



Legal background

OIML R117-1 is often applied for measuring systems and instruments for liquids other than water to provide so-called presumption of conformity to MID. Until recently, interpretation of R117-1 articles varied between Member States and Notified Bodies.

MI-005

Welmec WG10's main responsibility is to settle such potential differences in interpretation and they have done just that with the MI-005. This common interpretation is laid down in a paper that now forms a basis for future change in course.

Be assured that the conventional route of full testing remains open, but there is now a second possibility for obtaining MID Certification. The second option, concentrating on software tests, is subject to conditions. However, these conditions are designed to allow for the vast majority of SSDs to be tested accordingly.

NMi offers

- MID Evaluation Certificates, or
- MID Part Certificates
- Evaluation Reports in conformity with Welmec Guide
- Possible solution for mix-and-match issues
- Welmec 7.2 Certification



Alternative test method and conditions

The alternative test method can only be applied to SSDs meeting the conditions set out below:

- The SSD is completely digital (no analogue in- or outputs)
- The SSD is CE marked (generic CE directives)
- The SSD does not perform price calculations
- The SSD does not derive its power from the fuel dispenser(s)



Once determined that all conditions are met, testing is then focused on proving all applicable checking facilities, as specified by OIML R117-1, are present and operating properly.

In some cases, depending on the equipment's design, this may not be as straightforward as it sounds. After all, correct operation of checking facilities can only be proven when errors and malfunctions are generated or simulated. Therefore, it may be necessary to use R&D-type auxiliary equipment and/or special test software to determine that these checking facilities are present and in proper working condition.

MID and pre-MID Self-Service Devices

The alternative outlined above applies to MID Certification in general and therefore applies to both new SSDs as well as pre-MID devices that need a certification upgrade. As such, it can provide a solution for nationally approved and certified SSDs that need to be connected or applied with MID compliant fuel dispensers. It, therefore, could also provide a solution to some of the so-called "mix-and-match" issues that may exist.

Further developments

Prompted by discussions in MID's Measuring Instruments Committee, another decision relevant to SSDs was made: only SSDs that (temporarily) operate as "decisive registrations" are subject to legal control. Effectively this relates to two modes of operation, being:

1. Unattended service mode – i.e. SSDs capable of being switched to unattended service mode (e.g. where the owner of the installation is not present during measurement)
2. Sales Stacking – a mode that allows a fuel dispenser to be used by the next customer before the previous transaction has been settled

In both cases the metrologically relevant data is only available on or in the SSD and not in the dispenser. This effectively allows SSDs, exclusively in attended operating mode (both parties are present during the transaction), to be outside legal control, provided such is clearly marked. SSDs that can be switched in to unattended service mode or sales stacking are under legal control. Better yet, this is applicable to SSDs in all EU member states.

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